

Appln No. 10/036,235
Amdt date May 11, 2004
Reply to Office action of January 21, 2004

Amendments to the Claims:

Please amend the claims as follows:

1. - 13. (Canceled)

14. (Currently amended) A vertebral alignment/fixation system comprising:

at least one elongated spinal adjustment device;

at least one vertebral alignment/fixation assembly comprising:

a screw comprising an elongated, partially cannulated shaft defining an axially arranged inner screw chamber and a screw axis, an axial opening being arranged at ~~the~~ a proximal end of the shaft providing access to the inner screw chamber of the shaft and a tapered tip arranged at the distal end of the shaft, and wherein ~~the~~ a distal end of the shaft is externally threaded for driving the screw into bone and wherein the proximal end of the shaft further comprises an anchor mechanism for attachment of at least one piece of fixation hardware, and

an alignment rod comprising an elongated shaft with an engaging portion arranged at the distal end of the shaft designed to insert into the axial opening and cooperatively engage the inner screw chamber of the shaft, and a elongated portion arranged at the proximal end of the shaft, the elongated portion of the alignment rod having an outer diameter less than or equal to that of the screw;

at least one piece of fixation attachment hardware designed to slide down the alignment rod and cooperatively engage the proximal anchor mechanism of the screw such that the at least one fixation attachment is fixedly attached

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thereto, the at least one fixation attachment further being designed to anchor the at least one spinal adjustment device in place.

15. (Original) A vertebral alignment/fixation system as described in claim 14, further comprising a filler plug, mateable with said inner screw chamber, the plug being designed to lockingly engage within and fill the inner screw chamber.

16. (Original) A vertebral alignment/fixation system as described in claim 14, wherein the spinal adjustment device is chosen from the group consisting of: plates, rods, clamps, crosslinks and wires.

17. (Original) A vertebral alignment/fixation system as described in claim 14, wherein the fixation attachment is chosen from the group consisting of: clamps, bolts and nuts.

18. (Canceled)

19. (Original) A vertebral alignment/fixation system as described in claim 14, wherein the inner screw chamber of the shaft and the engaging portion of the alignment rod further comprise engagement mechanisms designed to cooperatively engage to lockingly hold the engaging portion of the alignment rod within the inner screw chamber of the screw shaft.

20. (original) A vertebral alignment/fixation system as described in claim 19, wherein the engagement mechanism is selected from the group consisting of: a threaded fitting, a compression fitting, and a twist and lock mechanism.

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21. - 23. (Canceled)

24. (Original) A vertebral alignment/fixation assembly as described in claim 14, wherein the elongated portion of the alignment rod is threaded to receive a threaded attachment.

25. (Currently amended) A vertebral alignment/fixation assembly as described in claim 24, wherein the ~~threaded attachment is the~~ elongated portion of the alignment rod is threaded to receive the threaded attachment consisting of either a T-type handle or a screwdriver-type handle.

26. (Canceled)

27. (Original) A vertebral alignment/fixation system as described in claim 14, wherein the system components are made of stainless steel.

28. (Currently amended) A vertebral alignment/fixation method comprising:

- providing a vertebral alignment/fixation system as described in claim 14;
- driving the screw into a vertebral body;
- inserting ~~an~~ the alignment rod into the inner screw chamber of the screw;
- aligning the vertebral body with the alignment rod;
- sliding a piece of fixation attachment hardware down the alignment rod onto the screw;
- tightening piece of fixation attachment hardware onto the screw; and
- attaching a spinal adjustment device onto the fixation attachment hardware to fix the vertebral body in the chosen alignment.

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29. (Original) A vertebral alignment/fixation method comprising utilizing a vertebral alignment/fixation system as described in claim 14 to align at least one vertebral body.

30. (Currently amended) A vertebral alignment/fixation method comprising utilizing a plurality of vertebral ~~alignment/fixation~~ alignment assemblies ~~as described in claim 1~~ to align at least one vertebral body-, wherein each of the vertebral alignment assemblies comprises:

a screw comprising an elongated, partially cannulated shaft defining an axially arranged inner screw chamber and a screw axis, an axial opening being arranged at a proximal end of the shaft providing access to the inner screw chamber of the shaft and a tapered tip arranged at a distal end of the shaft, and wherein the distal end of the shaft is externally threaded for driving the screw into bone and wherein the proximal end of the shaft further comprises an anchor mechanism for attachment of at least one piece of fixation attachment hardware; and

an alignment rod comprising an elongated shaft with an engaging portion arranged at a distal end of the shaft designed to insert into the axial opening and cooperatively engage the inner screw chamber of the shaft, and an elongated portion arranged at a proximal end of the shaft, the elongated portion of the alignment rod having an outer diameter less than or equal to that of the screw.

31. - 34. (Canceled)